

**Claims**

1. A spasmolytic comprising xenon or a xenon-containing gas mixture.
- 5 2. The spasmolytic as claimed in claim 1, characterized in that xenon is present in therapeutically effective amount.
3. The spasmolytic as claimed in claim 1 or 2, characterized in that the spasmolytic comprises NO or an NO source in therapeutically effective amount.
- 10 4. A spasmolytic comprising xenon or a xenon-containing gas and a spasmolytic which is administered orally or intravenously as combination product for simultaneous, separate or sequential use in the treatment of spasms.
- 15 5. The spasmolytic as claimed in claim 4, characterized in that the spasmolytic is used for the treatment of vasospasms.
6. A medicament comprising xenon and an NO source or comprising a xenon-containing gas and an NO source.
- 20 7. The use of xenon or of a xenon-containing gas mixture and, where appropriate, of an NO source to produce a medicament for the treatment of spasms, to produce a medicament for the treatment of vasospasms, to produce a medicament for the treatment of cerebral vasospasms, to produce a medicament for the treatment of impairments of blood flow, in particular to produce a gaseous medicament for the treatment of impairments of blood flow in the brain, to produce a medicament for the treatment of impairment of cerebral perfusion, to produce a medicament for the treatment of coronary perfusion impairment, to produce a medicament for the treatment of cognitive impairments, to produce a medicament for the treatment of stroke, to produce a medicament for the prophylaxis of stroke, to produce a medicament for improving the oxygen supply in the brain, to produce a medicament for the treatment von post-ischemia syndrome or to produce a medicament for promoting blood flow in the brain, to produce a medicament for improving the
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oxygenation of the body, to produce a medicament for improving the oxygenation of the brain.

- 5 8. The use of xenon or of a xenon-containing gas mixture to produce a medicament having a vasodilating effect in capillary or precapillary vascular systems of the human body.
- 10 9. The use of xenon or of a xenon-containing gas mixture and, where appropriate, of an NO source to produce a medicament for the prophylaxis and/or therapy of impairments of cognitive performance, also postoperatively.
- 10 10. The use of xenon or of a xenon-containing gas mixture and, where appropriate, of an NO source for the treatment of spasms.
- 15 11. The use of xenon or of a xenon-containing gas, oxygen and, where appropriate, of an NO source for supplying oxygen to spontaneously breathing patients.